

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

6321074

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November 20, 2001

Apparatus and method for reducing oscillator frequency
pulling during AM modulation

REISSUE: November 19, 2003 - Reissue Application filed Ex. Gp.: 2684; Re. S.N.
10/717,426 (O.G. February 17, 2004)

APPL-NO: 336912 (09)

FILED-DATE: June 21, 1999

GRANTED-DATE: November 20, 2001

CORE TERMS: frequency, pulling, modulation, filter, synthesizer, oscillator,
spurious, mixer, divider, architecture ...

LEXIS-NEXIS

Library: PATENT

File: ALL

LEXIS-NEXIS
Library: PATENT
File: CASES

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6,321,074 OR 6321074

LEXIS-NEXIS
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1 PN=US 6321074

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4/39/1

DIALOG(R) File 345:Inpadoc/Fam.& Legal Stat

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Basic Patent (No,Kind,Date): CA 2298926 AA 20000818 <No. of Patents: 011>

Patent Family:

Patent No	Kind	Date	Applic No	Kind	Date	
CA 2298926	AA	20000818	CA 2298926	A	20000217	(BASIC)
CA 2298927	AA	20000818	CA 2298927	A	20000217	
CA 2298928	AA	20000818	CA 2298928	A	20000217	
CA 2298929	AA	20000818	CA 2298929	A	20000217	
CA 2298992	AA	20000818	CA 2298992	A	20000218	
CA 2298926	C	20021231	CA 2298926	A	20000217	
CA 2298928	C	20030729	CA 2298928	A	20000217	
US 6297708	BA	20011002	US 506169	A	20000217	
US 6321074	BA	20011120	US 336912	A	19990621	
US 6373236	BA	20020416	US 433331	A	19991103	
US 6417729	BA	20020709	US 491538	A	20000126	

Priority Data (No,Kind,Date):

US 120641 P 19990218
US 433331 A 19991103
US 336912 A 19990621
US 491538 A 20000126
US 325050 A 19990603
US 506169 A 20000217

PATENT FAMILY:

CANADA (CA)

Patent (No,Kind,Date): CA 2298926 AA 20000818

TEMPERATURE COMPENSATED POWER DETECTOR DETECTEUR DE PUISSANCE A
COMPENSATION DE TEMPERATURE (English; French)

Patent Assignee: ITRON INC (US)

Author (Inventor): SADOWSKI ERIC (US); LEMAY NORMAND T JR (US)

Priority (No,Kind,Date): US 120641 P 19990218; US 433331 A
19991103

Applic (No,Kind,Date): CA 2298926 A 20000217

IPC: * G01R-021/14

Language of Document: English

Patent (No,Kind,Date): CA 2298927 AA 20000818

APARATUS AND METHOD FOR REDUCING OSCILLATOR FREQUENCY PULLING DURING AM
MODULATION APPAREIL ET METHODE POUR REDUIRE L'ENTRAINEMENT DE
FREQUENCE EN MODULATION D'AMPLITUDE (English; French)

Patent Assignee: ITRON INC (US)

Author (Inventor): LEMAY NORMAND T JR (US)

Priority (No,Kind,Date): US 120641 P 19990218; US 336912 A
19990621

Applic (No,Kind,Date): CA 2298927 A 20000217

IPC: * H03C-001/04

Language of Document: English

Patent (No,Kind,Date): CA 2298928 AA 20000818

LINEAR POWER CONTROL LOOP BOUCLE DE COMMANDE LINEAIRE DE PUISSANCE
(English; French)

Patent Assignee: ITRON INC (US)

Author (Inventor): LOFSTAD ERIC W (US); MACCONNELL JOHN W (US);
SADOWSKI ERIC (US); BRUNN BRIAN T (US); LEMAY NORMAND T JR (US)

Priority (No,Kind,Date): US 120641 P 19990218; US 491538 A

20000126
 Applic (No,Kind,Date): CA 2298928 A 20000217
 IPC: * H03G-003/20
 Language of Document: English
 Patent (No,Kind,Date): CA 2298929 AA 20000818
 TEMPERATURE COMPENSATED CONSTANT CURRENT SOURCE SOURCE DE COURANT
~~CONSTANT A COMPENSATION DE TEMPERATURE (English; French)~~
 Patent Assignee: ITRON INC (US)
 Author (Inventor): LEMAY NORMAND T JR (US)
 Priority (No,Kind,Date): US 120641 P 19990218; US 325050 A
 19990603
 Applic (No,Kind,Date): CA 2298929 A 20000217
 IPC: * G05F-001/567
 Language of Document: English
 Patent (No,Kind,Date): CA 2298992 AA 20000818
 TEMPERATURE COMPENSATED HIGH PERFORMANCE OSCILLATOR OSCILLATEUR A
 COMPENSATION THERMIQUE A HAUT RENDEMENT (English; French)
 Patent Assignee: ITRON INC (US)
 Author (Inventor): LEMAY NORMAND T JR (US)
 Priority (No,Kind,Date): US 120641 P 19990218
 Applic (No,Kind,Date): CA 2298992 A 20000218
 IPC: * H03B-005/04; H03B-005/30
 Language of Document: English
 Patent (No,Kind,Date): CA 2298926 C 20021231
 TEMPERATURE COMPENSATED POWER DETECTOR DETECTEUR DE PUISSANCE A
 COMPENSATION DE TEMPERATURE (English; French)
 Patent Assignee: ITRON INC (US)
 Author (Inventor): LEMAY NORMAND T JR (US); SADOWSKI ERIC (US)
 Priority (No,Kind,Date): US 120641 P 19990218; US 433331 A
 19991103
 Applic (No,Kind,Date): CA 2298926 A 20000217
 IPC: * G01R-021/14
 Language of Document: English
 Patent (No,Kind,Date): CA 2298928 C 20030729
 LINEAR POWER CONTROL LOOP BOUCLE DE COMMANDE LINEAIRE DE PUISSANCE
 (English; French)
 Patent Assignee: ITRON INC (US)
 Author (Inventor): LOFSTAD ERIC W (US); SADOWSKI ERIC (US);
 MACCONNELL JOHN W (US); BRUNN BRIAN T (US); LEMAY NORMAND T JR
 (US)
 Priority (No,Kind,Date): US 120641 P 19990218; US 491538 A
 20000126
 Applic (No,Kind,Date): CA 2298928 A 20000217
 IPC: * H03G-003/20
 Language of Document: English

CANADA (CA)

Legal Status (No, Type, Date, Code, Text):
 CA 2298926 P 20030403 CA EEER EXAMINATION REQUEST
 DATE: 20010504
 CA 2298927 P 20030403 CA EEER EXAMINATION REQUEST
 DATE: 20010504
 CA 2298928 P 20030403 CA EEER EXAMINATION REQUEST
 DATE: 20010504
 CA 2298929 P 20030820 CA FZDE DEAD
 DATE: 20030217
 CA 2298992 P 20030403 CA EEER EXAMINATION REQUEST
 DATE: 20010504

UNITED STATES OF AMERICA (US)

Patent (No,Kind,Date): US 6297708 BA 20011002

Temperature compensated high performance oscillator (English)
 Patent Assignee: ITRON INC (US)
 Author (Inventor): LEMAY NORMAND T (US)
 Priority (No,Kind,Date): US 506169 A 20000217; US 120641 P 19990218
 Applic (No,Kind,Date): US 506169 A 20000217
 National Class: * 331176000; 331117000R; 331116000R; 331156000; 331074000; 331034000; 331175000
 IPC: * H03B-005/00
 Language of Document: English
 Patent (No,Kind,Date): US 6321074 BA 20011120
 Apparatus and method for reducing oscillator frequency pulling during AM modulation (English)
 Patent Assignee: ITRON INC (US)
 Author (Inventor): LEMAY NORMAND T (US)
 Priority (No,Kind,Date): US 336912 A 19990621; US 120641 P 19990218
 Applic (No,Kind,Date): US 336912 A 19990621
 National Class: * 455260000; 455108000; 455075000; 455076000; 455112000; 455118000; 455119000; 332363000; 332127000
 IPC: * H04B-001/06
 Language of Document: English
 Patent (No,Kind,Date): US 6373236 BA 20020416
 Temperature compensated power detector (English)
 Patent Assignee: ITRON INC (US)
 Author (Inventor): LEMAY JR NORMAND T (US); SADOWSKI ERIC (US)
 Priority (No,Kind,Date): US 433331 A 19991103; US 120641 P 19990218
 Applic (No,Kind,Date): US 433331 A 19991103
 National Class: * 324095000; 324648000; 324600000; 324685000; 324721000; 324072500; 323369000; 323907000
 IPC: * G01R-023/04; G01R-027/04; G01R-027/00; G01R-027/26; H03M-001/00
 Language of Document: English
 Patent (No,Kind,Date): US 6417729 BA 20020709
 Linear power control loop (English)
 Patent Assignee: ITRON INC (US)
 Author (Inventor): LEMAY NORMAND T (US); BRUNN BRIAN T (US); MACCONNELL JOHN W (US); SADOWSKI ERIC (US); LOFSTAD ERIC W (US)
 Priority (No,Kind,Date): US 491538 A 20000126; US 120641 P 19990218
 Applic (No,Kind,Date): US 491538 A 20000126
 National Class: * 330129000; 330140000
 IPC: * H03G-003/20
 Language of Document: English

UNITED STATES OF AMERICA (US)

Legal Status (No,Type,Date,Code,Text):

US 6297708	P	19990218	US AA	PRIORITY (US PROVISIONAL APPLICATION)
				US 120641 P 19990218
US 6297708	P	20000217	US AE	APPLICATION DATA (PATENT)
				(APPL. DATA (PATENT))
				US 506169 A 20000217
US 6297708	P	20000217	US AS	ASSIGNMENT
				DATE: 20000216 ; ITRON, INC. 2401 NORTH STATE STREET WASECA MINNESO ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:LEMAY, NORMAND T.;REEL/FRAME:010571/0522
US 6297708	P	20011002	US BA	PATENT (NO PREVIOUS PRE-GRANT PUBLICATION)
US 6297708	P	20020326	US CC	CERTIFICATE OF CORRECTION

US 6321074	P	19990218	US AA	PRIORITY (US PROVISIONAL APPLICATION)
		US 120641	P	19990218
US 6321074	P	19990621	US AE	APPLICATION DATA (PATENT)
				(APPL. DATA (PATENT))
		US 336912	A	19990621
US 6321074	P	20011120	US BA	PATENT (NO PREVIOUS PRE-GRANT PUBLICATION)
US 6321074	P	20040217	US RF	REISSUE APPLICATION FILED (REISSUE APPL. FILED)
				DATE: 20031119
US 6373236	P	19990218	US AA	PRIORITY (US PROVISIONAL APPLICATION)
		US 120641	P	19990218
US 6373236	P	19991103	US AE	APPLICATION DATA (PATENT)
				(APPL. DATA (PATENT))
		US 433331	A	19991103
US 6373236	P	19991103	US AS	ASSIGNMENT
				DATE: 19991027 ; ITRON, INC. 2401 NORTH STATE STREET WASECA MINNESO ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:LEMAY, NORMAND T.JR.;SADOWSKI, ERIC;REEL/FRAME:010374/0178
US 6373236	P	20020416	US BA	PATENT (NO PREVIOUS PRE-GRANT PUBLICATION)
US 6373236	P	20021105	US CC	CERTIFICATE OF CORRECTION
US 6417729	P	19990218	US AA	PRIORITY (US PROVISIONAL APPLICATION)
		US 120641	P	19990218
US 6417729	P	20000126	US AE	APPLICATION DATA (PATENT)
				(APPL. DATA (PATENT))
		US 491538	A	20000126
US 6417729	P	20000424	US AS	ASSIGNMENT
				ITRON, INC. 2401 NORTH STATE STREET WASECA MINNESO ; ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:LEMAY, NORMAND T.;BRUNN, BRIAN T.;MACCONNELL, JOHN W.;AND OTHERS;REEL/FRAME:010727/0096;SIGNING DATES FROM 19991221 TO 20000121
US 6417729	P	20020709	US BA	PATENT (NO PREVIOUS PRE-GRANT PUBLICATION)
US 6417729	P	20030128	US CC	CERTIFICATE OF CORRECTION